



Saving Time and Money with Network Faxing

Despite the rise of e-mail and the Internet, fax continues to be an important means for business communications. Businesses can save significantly on long distance costs, increase worker productivity and streamline their business processes by the simple task of connecting a fax server to their local area network. This white paper outlines the specific cost savings, security benefits and productivity enhancements that can result from implementing a fax server solution. This paper also discusses why intelligent fax boards are the best choice for your fax server and how the new V.34 fax standard can further increase productivity and reduce costs.

It is estimated that there are 112 million fax machines in use in the world today with more than 6 million new units sold each year. One of the main reasons that fax has seen continued growth is its simplicity. Fax machines are easy to use and hence a simple way to receive documents quickly, safely and securely.

Despite the predominance of fax, businesses are not always aware of the significant cost savings and added benefits they can realize by the simple task of connecting a fax server to their local area network (LAN). This concept, called "Network Fax" or "LAN Fax", provides small, medium and enterprise businesses with a solution that automates the delivery and receipt of fax documents in electronic format, and provides direct integration with their office productivity tools.

The two types of network fax solutions a company can implement are "Desktop Fax" and "Production Fax". The distinction between the two is as follows:

- **Desktop Fax** enables end users to send and receive faxes confidentially and securely from the desktop, a function particularly important for healthcare, legal, financial and government environments.
- **Production Fax** enables businesses to integrate their existing file and mail servers, hosts, ERP or CRM systems with fax to automate the electronic delivery of purchase orders, invoices, order confirmations, loan and mortgage applications and financial reports.

The Cost Benefits of Bringing Fax to the Desktop

One of the key benefits of desktop faxing is the cost savings it provides. Each time a fax is sent manually, it requires the user to print the document, walk to the fax machine, write out the cover sheet, type in the fax number and then stand around for the fax machine to send and confirm delivery. This process can easily take five minutes per fax. If the person responsible for sending faxes is paid \$12–\$18/hour, then the cost of manually sending faxes can range from \$1–\$1.50 per fax. Multiply that by the number of faxes you send per day, per month, per year, and the labor cost involved with faxing can easily climb into thousands of dollars. Table 1 highlights the costs of manually faxing documents.

Table 1: Cost of Manual Faxing

Number of Faxes per day	Cost Per Day		Cost Per Week		Cost Per Year	
	\$1 per fax	\$1.50 per fax	\$1 per fax	\$1.50 per fax	\$1 per fax	\$1.50 per fax
10	\$10	\$15	\$50	\$75	\$2,600	\$3,900
50	\$50	\$75	\$250	\$375	\$13,000	\$19,500
100	\$100	\$150	\$500	\$750	\$26,000	\$39,00

These costs are conservative in that they do not take into account hidden costs such as paper to print out the fax, long distance charges to send the fax, and fax machine maintenance costs, such as replacing toner cartridges.

In addition, with desktop fax, end users can send faxes to multiple destinations in a matter of minutes, reducing their time away from their desk and increasing their efficiency. Unlike traditional walk up fax machines where users must enter multiple fax numbers to send to multiple faxes, desktop fax allows users to fax to multiple addresses the same way multiple people are sent an e-mail message.



Most importantly, desktop fax applications integrate easily with existing e-mail infrastructure, making the addition of fax to end user's e-mail applications as simple as e-mail attachments.

Desktop Faxing Also Offers Added Security Benefits

With desktop fax, end users can send, receive, view, print and save faxes from their PC or laptop computer. Desktop fax provides small, medium and enterprise customers safe, secure and confidential fax to and from the desktop through integration with Microsoft Exchange, Lotus Notes, Novell GroupWise and other email applications.

Desktop fax also provides end users with security and confidentiality in sending and receiving faxes to and from their desktop with receipt confirmation from Direct Inward Dial (DID) routing, in which end users are assigned a personal secure fax number that sends faxes directly to the desktop. Because the fax is received on the desktop PC, faxes are not left out in public view on traditional walk up fax machines where other people can view them.

In addition, signed documents transmitted by fax are legally binding. Despite the signing of the Electronic Signatures in Global and National Commerce Act (E-SIGN bill) in 2000 by President Bill Clinton that legalized digital signatures, the Internet has not replaced fax as a means of business communications as the experts had predicted. This is attributable to the fact that many businesses still have concerns regarding privacy, security, fraud and identity theft with the Internet. Bottom line: Fax is still one of the most highly secure mechanisms for transmitting important and confidential information.

Effective Document Delivery with Production Fax

Production fax is a key requirement for any company whose day-to-day operations consist of manually delivering large numbers of paper documents to customers and partners. Production fax allows companies automatically to deliver business critical documents electronically, such as purchase orders, invoices, statements, order confirmations, loan applications, loan approval/denial, bills of lading, financial reports and mortgage tables, without the need to print, mail or manually fax a document.

The electronic delivery of documents saves companies time and money. Mailing a document involves printing out the document, stuffing it into an envelope and mailing it out, which can cost almost a dollar per document with postage. As covered above, manually faxing documents is costly as well. If part of the day-to-day operations of your business involves sending out multiple documents per day, such as invoices, order confirmations and inventory ordering, then the cost per year can be a significant piece of a company's operational expenses. With production fax, a company can reduce these costs by up to 90% by automating fax delivery and reducing the administration costs to print, mail or fax a document.

Table 2 below highlights the savings a typical enterprise would experience with a production fax solution versus the cost to mail or manually fax a document.

Table 2: Savings from Production Fax

	Number of Documents Per Day		
	50	250	500
Yearly Cost of Manually Fax (Cost per document: \$1 - \$1.5)	\$13,000 – \$19,500	\$65,000 – \$97,000	\$130,000 - \$195,000
Yearly Cost of Manually Mail (Cost per document: \$0.65 - \$0.80)	\$8,450 – \$10,400	\$42,500 – \$52,000	\$84,500 - \$104,000
Yearly Cost with FAXport (Cost per document: \$0.10)	\$1,300	\$6,500	\$13,000
Production Fax Savings VS Manual Faxing (Cost per document: \$0.9 - \$1.40)	\$11,700 – \$18,200	\$58,500 – \$91,000	\$117,000 - \$182,000
Production Fax Savings VS Mail (Cost per document: \$0.55 - \$0.70)	\$7,150 – \$9,100	\$35,750 – \$45,500	\$71,500 - \$91,000



The other key benefits of installing a Production Fax solution are:

- **Increased Efficiency.** Improves document delivery efficiency through the electronic, automated batch driven delivery process.
- **Ease of Integration.** Enables the integration of existing CRM, ERP and file and mail server applications with fax.
- **Improved Customer Satisfaction.** Provides efficient order and information processing resulting in improved customer relations and improved customer satisfaction.

Making the Smart Choice with Intelligent Fax Boards

Implementing a network fax solution is as simple as installing network fax software on a standard server, plugging in a network fax board, and connecting the phone lines. However, what most companies do not realize is the added benefits, efficiencies and cost savings they could realize by installing an intelligent fax board, which is designed specifically for fax, as opposed to a dual purpose Class 1 or 2 data modem which is not fax only.

While intelligent fax boards cost more than a general-purpose data modem, they offer added features and benefits that improve the efficiency of sending and receiving faxes, resulting in reduced costs that pay for themselves in a number of ways:

- **Compatibility:** 99% with intelligent fax boards vs. 60–70% with Class 1 or 2 Fax modem. The most expensive part of any long distance call is the first minute—if you have to try three times before your data modem gets the fax through it will dramatically raise your long distance charges. Intelligent fax boards have much better first try connection success rates. This increases reliability, reduces the headaches associated with dropped fax calls and saves on long distance phone charges.
- **Scalability and Flexibility:** So that customers can manage system growth in an elegant fashion as their fax traffic grows, intelligent fax boards come in over 100 different variations, in analog or digital configurations. This means that customers can start with a low-density intelligent fax boards network fax and migrate to a higher density solution as their requirements change.
- **On-Board Processing:** All intelligent fax boards have on-board processing. This allows the fax boards to support advanced fax compression methods and highly efficient conversion rates. This saves CPU resources, increases reliability and saves on monthly phone charges. It also frees up the server CPU to handle other tasks. This is very important with high-density fax server installations.
- **Advanced Compression.** Using advanced compression formats such as MR & MMR with ECM (error correction mode) intelligent fax boards can send faxes as smaller files—to reduce transmission time, and save on long distance charges.
- **Automatic Inbound Routing.** Regular data modems can't support DID/DTMF/DDI Detection. Intelligent fax boards can capture routing information from the inbound fax call and pass it along to the LAN fax application so inbound faxes can be sent to the right people on the network—even automatically routing the inbound faxes to an individual MS Exchange, Lotus Notes, or Novell GroupWise box.

To learn more about the benefits of intelligent fax boards and how they save companies money, download the white paper titled “Why Intelligent Fax Boards are the Smart Choice” by Davidson Consulting at www.brooktrout.com/whitepapers.

Table 3 below summarizes the benefits of an intelligent fax board over a Class 1 or 2 fax modem.

Table 3: Benefits of Intelligent Fax Boards

Product	Fax Machine Capability	Advanced Compression	On Board Fax Processing	DID Inbound Routing	DID Inbound Routing
Intelligent Fax Boards	99%	Yes, MH, MR and MMR	Yes	Yes	33.6 Kbps
Class 1 or Class 2 Fax modem	60% - 70%	No, MH only	No	No	14.4 Kbps



Why Speed is Important: The V.34 Standard

Most fax devices today can only send faxes at V.17 speeds of up to 14.4 Kbps. However, the next generation of intelligent fax boards, sends and receives faxes at 33.6 Kbps using the V.34 fax standard. V.34 is the fastest speed a fax can be transmitted at today. Some of the key highlights of V.34 fax are:

- V.34 transmits at 33.6 Kbps and is over two times as fast as V.17 at 14.4 Kbps, fax, and more than three times as fast as V.29 at 9.6 Kbps.
- Most new fax machines sold today support V.34 fax and can send and receive faxes at 33.6 Kbps. This means that as more 33.6 Kbps fax machines become available, companies that implement a V.34 fax solution can take greater advantage of the long distance savings because the faxes they send will be received faster, thereby lowering the long-distance charges on their phone bill. Although most of the installed base of fax machines and modems are still only able to send at 14.4 Kbps (or slower), the number of V.34 enabled devices is growing quickly. According to Davidson Consulting, by 2006, 25% of the fax traffic will be sent through fax devices capable of 33.6 Kbps speeds.
- Along with the faster fax transmissions comes the ability to set up the call more quickly. Intelligent fax boards also supports V.8 or fast handshaking, which cuts call setup and session management time by 1.3 or more, which again reduces overall long distance charges required for sending a fax. Intelligent fax boards are offered in a variety of configurations, allowing customers to grow into their fax solution and increasing the number of ports as their requirements dictate. For customers requiring a medium density digital fax solution, intelligent fax boards are available in 4 to 16 channel configurations. For customers who require a higher density fax solution, the intelligent fax boards are available in 24 or 30 channel configurations per board with onboard T1/E1 interface. Upgrading to the V.34 fax technology with the intelligent fax board can save your company money. Take the example of a typical enterprise company that sends 1,250 4-page faxes per day at a long distance rate charge of \$.05 per minute. The table below highlights the savings accrued with intelligent fax boards. An important point to realize is that these savings are in addition to the savings a company would realize from implementing a network fax solution.

Table 4: Yearly Long Distance Savings with the Intelligent Fax Boards

	2003	2004	2005	2006
V.34 Savings Compared to V.17 (14.4 Kbps) Fax	\$15,286	\$17,534	\$20,231	\$24,952
V.34 Savings Compared to V.17 (14.4 Kbps) Fax	\$23,021	\$26,406	\$30,439	\$37,578

** Percent of 33.6 Kbps fax machine penetration and 33.6 Kbps fax traffic based on Davidson Consulting 2003 estimates*

Summary

The simple process of setting up a network fax server can significantly increase a company's efficiency and productivity. With desktop faxing, companies can save thousands of dollars a year in worker productivity costs alone. In addition, a fax server solution can provide the added security and confidentiality required for today's business environment. With desktop fax, a company that faxes 50 documents per day can save \$13,000 per year in reduced labor costs by simply sending and receiving faxes to the desktop.

For production fax applications, a fax server can improve document delivery efficiency through the electronic, automated batch driven delivery process and provides efficient order and information processing, resulting in improved customer relations and improved customer satisfaction. In the case of a company that delivers 500 documents per day, production fax can save as much as \$91,000 over manually mailing and \$182,000 over manual faxing.

Intelligent fax board further increases the savings a company realizes from network fax through the use of V.34 fax, which sends and receives faxes at 33.6 Kbps. This translates into reduced long distance charges and even greater savings.